

A JOINER'S ART: FRAME MAKING AS WOODWORKING

PART 4

The fourth installment of Timothy Holton's PFM-exclusive series continues exploring the craft by covering wood selecting, milling, and profiling.

By Timothy Holton

So far in this series, we first explored the roots of frame making in the shops of the cabinetmakers, called joiners, of the late Middle Ages; then considered wood, the material for our craft, and (also in that installment) the basic equipment and arrangement of the workshop where frame making takes place; and then in the last part, looked at milling and profiling the moulding used to make the frame. It's from that moulding, of course, that we cut the sides of our frame—which brings us to the subject of this installment: joinery, the techniques used to put those sides together.

A picture can only be well-framed if it's in a well-made frame. The traditional woodworkers who were the first frame makers regarded joinery as the essence of their trade—which is why they were called joiners. So it is also the essence of the art of the frame when frame making is restored to its roots and treated as a joiner's art. This genesis of the art reminds us that a well-made frame is, above all, put together well—that is, well-joined. Anything made with good craftsmanship embodies that care, and has (like wood) inherent value, beauty, and appeal. And nothing ex-



● Whiskey ad framed in quartersawn white oak with flush dowels.

presses that care, that craftsman's ethos, more than the way the object is put together.

The art of wooden joints is a whole world—a varied, beautiful, international world that anyone who appreciates the arts can revel in. This overview, though, will limit itself to traditional joints for western picture frames, especially the practical application of that tradition today. As with this entire series, it's really just an introductory sketch to a vast subject. Those seeking practical expertise will want to more fully educate themselves through classes and apprenticeship, as well as printed and online resources.

The miter joint has long been favored for picture frames. A miter allows the grain of the wood to flow more continuously around the frame. If the face of the frame is



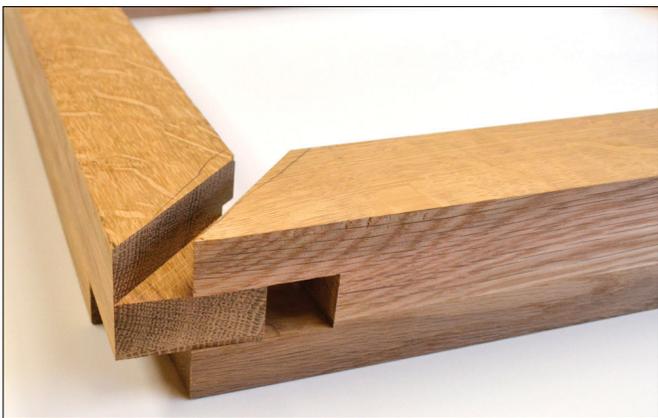
● Trevor Davis mortising (left) and a pair of mortising chisels (right).



● A splining jig helps strengthen joints and add decorative flair.

profiled, miters are the best way to carry that profile around the frame's corners. The diagonal lines of those miters serve the picture in several ways. They help direct the eye in to it—and, conversely, they radiate the picture out into its wider surroundings. Miters also enhance perspective in the picture, a key aspect of any representational work.

Traditionally, very often the mitered corners of frames were actually lap joints, bridle joints, and even mortise and tenon joints cut such that only the face of the joint was mitered. In my shop, while I have enjoyed on rare occasion using mitered bridle joints and tapered dovetail keys (which I'll touch on below), mitered frames are typically joined with simple splines—thin triangles of wood fit in slots cut in to the corners from the back of the frame. (Using framespeak here: the “back” means the outside, not the side facing the wall, which is called the “reverse.”) They provide excellent strength at minimal cost. Once set up for it, a shop can efficiently use basic equipment, like a table saw and benchtop planer, to spline mitered frames in an infinite variety of sizes and profiles. Slots for splines may be cut into the frame's corners using a simple jig on the table saw. With the frame clamped in a vertical position in the jig, we run its corners through the saw. A typical 10” table saw blade is 1/8” thick, so strips of wood planed to



● An example of a mitered bridle joint.

that thickness are milled to perfectly fit into those slots with the grain running perpendicular to the miter. They are then glued in, clamped, and when dry, trimmed and sanded flush. A shallow frame needs just one spline, but you can have as many as you like on a deeper frame.

We might say that's the standard way to spline a frame. It's not only a good, strong joint, but a satisfying visible detail that speaks of craftsmanship and quality, gives quiet but effective emphasis to the inherently interesting corners of the frame, and is easily appreciated by the customer. Even when made in the same wood as the rest of the frame, splines stand out because the exposed end grain of the spline appears darker. Because splines are visible, this detail becomes decorative. As such, it invites all kinds of creative possibilities. Of course splines can be emphasized even more by using contrasting wood. By slightly adjusting the jig, you can widen the slots for wider and bolder splines. A spline can go as deep as you like, and



● A view of a frame's splines being clamped.

thus extend from the corner as far as you want—although if it penetrates the rabbet, you'll need to trim that portion of the spline that's gone through.

One decorative treatment I like to do with splines is to make them a bit thicker and leave them slightly proud. Standing out in relief, they add interest to a plain square corner. And when the corner is rounded or shaped, proud splines not only accent the corner but its special shape. Proud splines can also relate to a decorative detail on the face of the frame. My favorite thing to do, though, is shown in examples here of shaping splines in forms that contrast and complement the lines of the (usually, but not always, straight) side members.

Splines don't have to go through the middle of the miter. They can also go across the face and reverse. We call these face splines. And like regular splines they can be shaped to decorative effect, like these examples demonstrate.



● Proud splines add interest to a plain square corner.

Many traditional mitered joiner's frames were put together with dovetail keys. Like splines, these run diagonally across the miter, but are thicker and have angled sides (cut with a dovetail bit in a router) to mate with the angled walls of a dovetail socket cut in the reverse of the frame. The key is slightly tapered lengthwise, so as it's slid into the socket, it stops when fully engaged. Also like splines, these keys are visible on the back of the frame, and with the contrasting end grain emphasizing their dovetail shape, signal serious craftsmanship.

Our use of proud splines and other visible joinery in miters was inspired by furniture of the Arts and Crafts Movement. When I began exploring frame making as woodworking, I would pore through books on the furniture of Gustav Stickley, Greene and Greene, and other turn-of-the-century architects and designers who often deliberate-



● Face splines inserted into mitered corners for strength and style.

ly articulated their joinery and used it for decorative effect. Stickley wrote of his work,

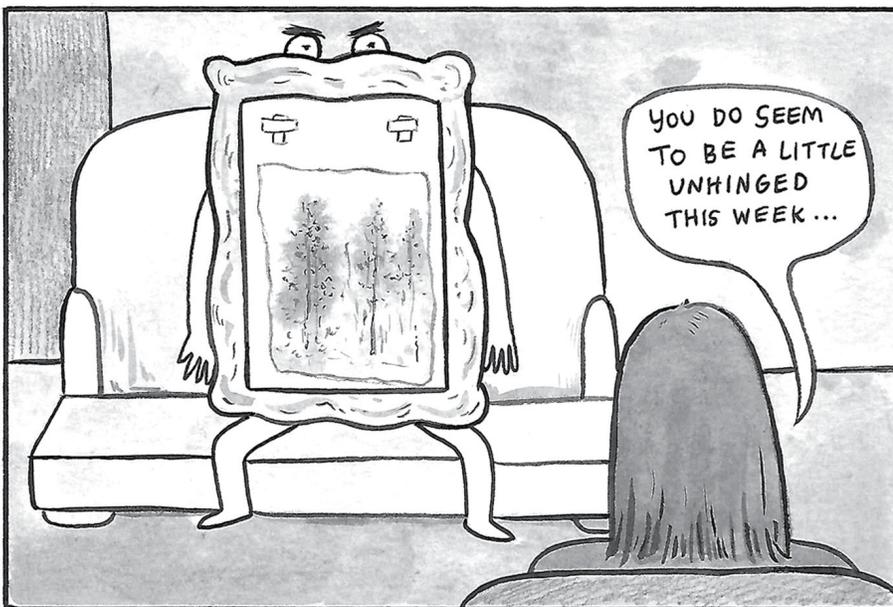
"I endeavored to turn such structural devices as the mortise and tenon to ornamental use; to employ them in such a way as to force them to give accent and variety to the outlines of the object in which they occurred."

He was referring specifically to through mortise and tenon joints, in which a hole, the mortise, is cut all the way through one member, and the tenon, formed by cutting down the end of the adjoining member to fit through the mortise, is made long enough so that its end protrudes slightly.

I found this detail of the through mortise and tenon joint very compelling. Both strong and attractive, it exemplified the inherent value of craftsmanship. And I thought it would be a great feature for picture frames. So when I started out making joiner's frames in the '80's, all my work

had through mortise and tenon joints. After several early projects using only hand tools, I was won over and decided to scale up by switching to machinery. To cut mortises, I got a hollow chisel mortiser, which is used much like a drill press and works similarly to bore holes in wood. In this case, though, a special drill bit passes through an ingenious four-sided stationary hollow chisel, so that the holes are square instead of round. As for my tenons, I cut them on a dado set on the table saw, using the saw's miter gauge and running the end of the workpiece across the dado set in repeat cuts. Tenons may also be cut on the table saw with a tenoning jig, or on the bandsaw. Like splines, protruding through tenons may be extended and

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Frame Therapy

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● Two examples of Oxford lap-jointed frames.

shaped, offering infinite decorative possibilities.

As much as I enjoyed exploring mortise and tenon joinery, it made my shop a bit too niche. I soon broadened my scope, first with blind mortise and tenon joints (which don't go all the way through the member) and lap joints.

For the latter, I took inspiration from so-called Oxford frames of the nineteenth century as well as vernacular, rustic examples. They can be simple or decorative, as shown in these examples from my shop. We cut lap joints with a dado blade on the table saw. Two members are notched, each one half way through so they fit together. Like the mortise and tenon joint, the lap joint may be pinned with a dowel and decorative plug.

Bridle joints differ from mortise and tenon joints only in that one member is slotted rather than mortised to receive a tenon. A shop that can master these is ready to offer mitered bridle joints, with all the advantages of a miter on the face but the strength of the classic bridle joint.



● Holton Studio Frame No. 4001 on a Sam Washburn oil painting.

Although we tend to separate the protective function of the frame from its expressive aspects, this is a mistake. When Gustav Stickley made the point that joinery—the pride of the craftsman for whom he named his Craftsman furniture—can play a decorative role in furniture, he was saying that joinery and craftsmanship are expressive. If a frame is structurally weak it expresses indifference to the picture's protection. You might even say that our presentation lacks integrity. But if it is strong and made with care, it expresses, in the most sincere form, regard for the picture and our desire to protect it and all its meaning and significance.

Good craftsmanship, and the joinery at its heart, expresses care—the entire reason we frame and display pictures and cultivate the joiner's art of frame making. **PFM**



Timothy Holton

Timothy Holton is the owner of Holton Studio Frame-Makers in Berkeley, CA. A native Californian inspired by the art and architecture of his home state, Tim began his career in framing at Storey Framing in 1975. After earning a history degree and a brief career in live theater, Tim returned his attention to framing, honing the joining and carving skills that distinguish his work. After the Oakland Museum's contemporary artisan gallery displayed his work in 1993, he was spurred to open his own business, which now specializes in hand-carved hardwood frames built entirely in-house. Tim lives in Berkeley with his wife, Stephanie McCoy. They have an adult daughter, Ella.

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